

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) An amplified laser comprising:

a substrate,

a semiconductor optical amplifier (SOA), coupled to the substrate and including an amplifier anode electrode and an amplifier cathode electrode, and

a semiconductor laser, coupled to the substrate and including a semiconductor laser anode electrode and a semiconductor laser cathode electrode,

wherein;

the semiconductor laser and the SOA are configured on the substrate so that the laser is optically coupled to the SOA; and

at least one of the semiconductor laser anode electrode ~~and or~~ semiconductor laser cathode electrode is electrically coupled to at least one of the amplifier anode electrode ~~and or~~ amplifier cathode electrode ~~to receive operational powersuch that the semiconductor laser and the SOA are electrically connected in series.~~

2. (Currently Amended) The amplified laser of claim 1, further comprising an electro-absorption modulated laser (EML) package that encloses the semiconductor laser and the SOA, the EML package including:

a first electrical contact electrically coupled to at least one of the anode electrode of the SOA ~~and or~~ the anode electrode of the semiconductor laser;

a second electrical contact electrically coupled to at least one of the cathode electrode of the SOA ~~and or~~ the cathode electrode of the semiconductor laser; and

an optical output port configured to provide an output amplified optical signal.

3. (Currently Amended) An amplified laser comprising:

a substrate;

a semiconductor optical amplifier (SOA), coupled to the substrate and including an amplifier anode electrode and an amplifier cathode electrode;

a semiconductor laser, coupled to the substrate and including a semiconductor laser anode electrode and a semiconductor laser cathode electrode;

an electro-absorption modulated laser (EML) package that encloses the semiconductor laser and the SOA, the EML package including:

a first electrical contact electrically coupled to at least one of the anode electrode of the SOA or the anode electrode of the semiconductor laser;

a second electrical contact electrically coupled to at least one of the cathode electrode of the SOA or the cathode electrode of the semiconductor laser; and

an optical output port configured to provide an output amplified optical signal; and

~~The amplified laser of claim 2, further comprising at least one of:~~

a thermo-electric cooler (TEC) thermally coupled to the substrate, the TEC electrically coupled to a third electrical contact and a fourth electrical contact of the EML package;

a feedback monitor optically coupled to the semiconductor laser, the feedback monitor being electrically coupled to a fifth electrical contact and a sixth electrical contact of the EML package; and/or

an optical modulator optically coupled to the SOA, the optical modulator being electrically coupled to a seventh electrical contact of the EML package;

wherein;

the semiconductor laser and the SOA are configured on the substrate so that the laser is optically coupled to the SOA; and

at least one of the semiconductor laser anode electrode or semiconductor laser cathode electrode is electrically coupled to at least one of the amplifier anode electrode or amplifier cathode electrode such that the semiconductor laser and the SOA are electrically connected in series or in parallel.

4. (Original) The amplified laser of claim 1, wherein the cathode electrode of the semiconductor laser is electrically coupled to the anode electrode of the SOA whereby the semiconductor laser and SOA are connected in series.

5. (Currently Amended) The amplified laser of claim 4, further comprising an electronic component electrically coupled in parallel to at least one of the semiconductor laser ~~and or~~ the SOA.

6. (Currently Amended) The amplified laser of claim 5, wherein the electronic component includes at least one of a resistor, a capacitor, an inductor, ~~and or~~ an integrated circuit.

7. (Original) The amplified laser of claim 1, wherein the anode electrode of the semiconductor laser is electrically coupled to the cathode electrode of the SOA whereby the semiconductor laser and the SOA are connected in series.

8. (Currently Amended) The amplified laser of claim 7, further comprising an electronic component electrically coupled in parallel to one of the semiconductor laser ~~and or~~ the SOA.

9. (Currently Amended) The amplified laser of claim 8, wherein the electronic component includes at least one of a resistor, a capacitor, an inductor, ~~and~~or an integrated circuit.

10. (Canceled)

11. (Withdrawn) An amplified laser comprising:

a substrate;

a semiconductor optical amplifier (SOA), coupled to the substrate and including an amplifier anode electrode and an amplifier cathode electrode;

a semiconductor laser, coupled to the substrate and including a semiconductor laser anode electrode and a semiconductor laser cathode electrode; and

~~The amplified laser of claim 10, further comprising an electronic component electrically coupled in series to one of the semiconductor laser and~~or the SOA

wherein;

the semiconductor laser and the SOA are configured on the substrate so that the laser is optically coupled to the SOA; and

the cathode electrode of the semiconductor laser is electrically coupled to the cathode electrode of the SOA; and

the anode electrode of the semiconductor laser is electrically coupled to the anode electrode of the SOA, whereby the semiconductor laser and the SOA are connected in parallel.

12. (Withdrawn) The amplified laser of claim 11, wherein the electronic component includes at least one of a resistor, a capacitor, an inductor, ~~and~~or an integrated circuit.

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13.- 22. (Canceled)